



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2016–0029; 4500030113]

RIN 1018–BA78

Endangered and Threatened Wildlife and Plants; Endangered Species Status for Black Warrior Waterdog

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the Black Warrior waterdog (*Necturus alabamensis*), an aquatic salamander from the Black Warrior River Basin of Alabama, as an endangered species under the Endangered Species Act (Act) because of the severity and immediacy of threats currently impacting the species. If we finalize this rule as proposed, it would extend the Act's protections to this species.

DATES: We will accept comments received or postmarked on or before [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

Comments submitted electronically using the Federal eRulemaking Portal (see

ADDRESSES, below) must be received by 11:59 p.m. Eastern Time on the closing date.

We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by [**INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter FWS–R4–ES–2016–0029, which is the docket number for this rulemaking. Then click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R4–ES–2016–0029, U.S. Fish and Wildlife Service, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see *Public Comments*, below, for more information).

FOR FURTHER INFORMATION CONTACT: William Pearson, Field Supervisor, U. S. Fish and Wildlife Service, Alabama Ecological Services Field Office, 1208 Main Street, Daphne, AL 36526; by telephone 251–441–5184; or by facsimile 251–441–6222. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Information Requested

Public Comments

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned governmental agencies, Native American tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The Black Warrior waterdog's biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) Factors that may affect the continued existence of the species, which may include habitat modification or destruction, overutilization, disease, predation, the inadequacy of existing regulatory mechanisms, or other natural or manmade factors.

(3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and existing regulations that may be addressing those threats.

(4) Additional information concerning the historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act (16 U.S.C. 1531 et seq.) directs that determinations as to whether any species is a threatened or endangered species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Public Hearing

Section 4(b)(5) of the Act requires us to hold one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register** (see **DATES**, above). Such requests must be sent to the address shown in the **FOR FURTHER INFORMATION CONTACT** section. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

Peer Review

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our listing determination is based on scientifically sound data, assumptions, and analyses. The peer reviewers will inform our determination. We invite comments from the peer reviewers during this public comment period.

Previous Federal Actions

The Black Warrior waterdog (then known as the Sipsey Fork waterdog) was first identified as a Category 2 species in our 1982 Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (47 FR 58454, December 30, 1982). Category 2 candidates were defined as taxa for which we had information that proposed listing was possibly appropriate, but for which substantial data on biological vulnerability and threats were not available to support a proposed rule at the time. The species remained on

subsequent annual candidate notices of review (CNORs) (56 FR 58804, November 21, 1991; 59 FR 58982, November 15, 1994). In the February 28, 1996, CNOR (61 FR 7596), we discontinued the designation of Category 2 species as candidates; therefore, the Black Warrior waterdog was no longer a candidate species.

In 1999, the Black Warrior waterdog was again added to the candidate list (64 FR 57534, October 25, 1999). At present, candidates are those fish, wildlife, and plants for which we have on file sufficient information on biological vulnerability and threats to support preparation of a listing proposal, but for which development of a listing rule is precluded by other higher priority listing activities. The Black Warrior waterdog was included in all of our subsequent annual CNORs (66 FR 54808, October 30, 2001; 67 FR 40657, June 13, 2002; 69 FR 24876, May 4, 2004; 70 FR 24870, May 11, 2005; 71 FR 53756, September 12, 2006; 72 FR 69034, December 6, 2007; 73 FR 75176, December 10, 2008; 74 FR 57804, November 9, 2009; 75 FR 69222, November 10, 2010; 76 FR 66370, October 26, 2011; 77 FR 69994, November 21, 2012; 78 FR 70104, November 22, 2013; 79 FR 72450, December 5, 2014; 80 FR 80584, December 24, 2015). On May 11, 2004, we were petitioned to list the Black Warrior waterdog. The petitioner provided information the Service already had in its files and had used to identify the species as warranted for listing. As a result, no further action was taken on the petition. The Black Warrior waterdog has a listing priority number of 2, which means that the candidate is a species with threats that are both imminent and high in magnitude.

Species Information

Taxonomy and Species Description

The Black Warrior waterdog is a large, aquatic, nocturnal salamander that permanently retains a larval form and external gills throughout its life (Conant and Collins 1998, pp. 419–420). Its head and body are depressed; its tail is compressed laterally, and each of its four legs has a foot with four toes. Larval Black Warrior waterdogs (28 to 48 millimeters (mm) (1 to 2 inches (in) total length)) are dark brown or black on their dorsum (upper surfaces) and have two light stripes running along their sides (Bailey 2000, p. 1). Adults may reach a maximum of 240 mm (9.5 in) total length; subadults (40 to 100 mm (1.5 to 4 in) total length) do not have the stripes that are present on larvae and are not conspicuously marked, although they do have a dark stripe extending from the nostril through the eye to the gills. Adults are usually brown, may be spotted or unspotted, and retain the dark eye stripe (Bailey 2000, p. 1). The ventral surface of all age classes is plain white.

In 1937, Viosca (1937, pp. 120–138) described the Black Warrior waterdog as *Necturus alabamensis*. In subsequent years, the name *N. alabamensis* was mistakenly applied to other waterdogs within the peer-reviewed literature. The taxonomy of the Black Warrior waterdog was clarified by Bart *et al.* (1997, pp. 192–201), and the original description by Viosca (1937, pp. 120–138) remains valid. The available taxonomic information on *N. alabamensis* has been carefully reviewed, and we conclude that this species is a valid taxon.

Distribution

The Black Warrior waterdog (waterdog) is found only within streams within the Black Warrior River Basin (Basin) in Alabama. The waterdog inhabits streams above the Piedmont Fall Line (the contact between the Coastal Plain and the adjacent Upland

provinces) within the Basin in Alabama, including parts of the North River, Locust Fork, Mulberry Fork, and Sipsey Fork drainages and their tributaries.

Waterdog habitat is similar to that of the flattened musk turtle (*Sternotherus depressus*), a species listed as threatened under the Act (52 FR 22418; June 11, 1987) and which is restricted to permanent streams above the Fall Line in the Black Warrior Basin (Mount 1975, p. 303). The waterdog received little attention between the time it was described in 1937 and the mid-1980s, when it was found during surveys in the Tennessee-Tombigbee Waterway (Ashton and Peavy 1985, pp. 1–15). During this time, reference to the species, beyond field guides and summary descriptions, could be found in only three scientific publications and one unpublished doctoral dissertation (Hecht 1958, pp. 4, 17; Neil 1963, pp. 166–174; Gunter and Brode 1964, pp. 114–126; Brode 1969, pp. 21–22, 62–64, 132).

There are a total of 11 historical records from sites in Blount, Tuscaloosa, Walker, and Winston Counties, Alabama. The historical waterdog records are sites from 10 streams or major segments: Sipsey Fork (two sites) of the Black Warrior River and Brushy Creek (a tributary to Sipsey Fork) in Winston County; Locust Fork and Blackburn Fork of the Little Warrior River in Blount County; Mulberry Fork, Lost Creek, and Blackwater Creek in Walker County; and Yellow Creek, North River, and Black Warrior River in Tuscaloosa County (Viosca 1937, pp. 120–122, 137–138; Ashton and Peavy 1985, pp. 1–15; Bailey 1992, pp. 7–9, 16–27; Bailey 1995, pp. 16–27; Bart *et al.* 1997, pp. 194–195, 198–200; Guyer 1997, p. 9; Bailey 2000, pp. 3–5). Only two of these records (Black Warrior River “near Tuscaloosa” in 1914 and 1937, and Mulberry Fork

“at Cordova” in 1938) were documented prior to the mid-1980s. These localities have since been inundated by impoundments.

Bailey (2000, pp. 1–24) conducted a habitat assessment of the 11 sites verified as Black Warrior waterdog localities prior to 1993. Bailey assessed the sites using subjective impressions of habitat suitability using parameters such as stream width and depth, water quality, substrate, structure (crevices, logs, etc.), and invertebrate fauna. Sites were stratified into four categories: good to excellent, moderate, poor to unsuitable, and impounded. Bailey concluded that one (9 percent) of the sites was good to excellent, four (36 percent) were of moderate quality, two (18 percent) were poor to unsuitable, and four (36 percent) were in impoundments.

Current Range and Distribution

At least 112 sites have been sampled for the Black Warrior waterdogs since 1990 (1990, 1991, 1992, 1994, 1996, 1997, 1998, 2008, 2009, 2011, 2012, and 2013) (Bailey 1995, pp. 16–27; Guyer 1997, pp. 19–21 and 1998, pp. 6–7; Durflinger-Moreno *et al.* 2006, pp. 73–74; Stoops *et al.* 2010, p. 6; Alabama Natural Heritage Program 2011, p. 4; 78 FR 70104, November 22, 2013, p. 70125; Godwin 2014, pers. comm.; Godwin 2013b, p. 1). Survey sites included all stream localities within the range of the species that approached or intersected roads and had appropriate habitat. Since 1990, the species has been reported from only 14 sites. These sites are in Blount (Blackburn Fork of the Little Warrior River), Marshall (Slab Creek, tributary to Locust Fork), Tuscaloosa (Yellow Creek, North River, Carroll Creek, Lye Branch, Mulberry Fork), Walker (Lost Creek, Little Blackwater Creek), and Winston (Sipsey Fork, Blackwater Creek, Browns Creek, Brushy Creek, Capsey Creek) Counties, Alabama. Guyer (1997, pp. 3–4) did a statistical

analysis of all waterdog field survey data. The relationship between cumulative number of site visits and the cumulative number of sites containing waterdogs indicated that 200 additional surveys would be needed to discover a single new locality for the species (Guyer 1997, p. 4).

No waterdogs were recently captured at any historic localities outside of William Bankhead National Forest (BNF). Therefore, we believe the populations are in decline outside of BNF. Only through the use of environmental DNA (eDNA) have we been able to determine that the species is still present at some historic locations. Environmental DNA is a surveillance tool used to monitor for the genetic presence of an aquatic species. According to Strickler (2015, p. 1), “Environmental DNA has proven to be a sensitive, accurate, and cost-efficient tool for species detection in aquatic environments and is especially attractive because it's non-invasive and poses no risk to aquatic animals. Even when an aquatic animal can't be seen or heard, it leaves traces of itself in the water by shedding skin, excreting waste, releasing gametes and decomposing. Investigators collect a water sample to detect the target species' DNA and determine whether the species has recently been in the water body.” Field surveys conducted between 2008 and 2012 at historical localities indicated only one population was still persisting in the BNF, Winston County (Stoops *et al.* 2010, p. 1–6; Godwin 2014, pers. comm.; Godwin 2013a, p. 1 and 2013b, p. 1). Additionally, the use of eDNA in 2013 and 2014 indicated that Black Warrior waterdogs were still present in Locust Fork, Gurley Creek, Rush Creek (BNF property), and Yellow Creek (Godwin 2014, pers. comm.), although no waterdogs were captured at the time.

Population Estimates and Status

Each of the 14 sites verified as a Black Warrior waterdog locality (see above) represented individual populations. Very little is known about the status of these populations. Only one or two animals were captured at survey sites with the exception of Sipsey Fork, which was chosen for an indepth study because waterdogs were most common there (Durflinger-Moreno *et al.* 2006, pp. 70–71). Fifty-two waterdogs were captured at the Sipsey Fork site over a 3-year period representing 173,160 trap hours (1 waterdog/3,330 trap hours). Thirty-five (67 percent) animals were adults, 5 (10 percent) were subadults, and 12 (23 percent) were larvae. The number of adult males and females captured was not significantly different from an expected 1:1 sex ratio (Durflinger-Moreno *et al.* 2006, p. 79). In the Sipsey Fork, the high number of sexually mature individuals indicates that recruitment and survival rates of the young age classes may be low (Durflinger-Moreno *et al.* 2006, p. 79).

The viability of any Black Warrior waterdog population, including Sipsey Fork population, is unknown.

Habitat

Rocks, submerged ledges, and other cover play important roles in determining habitat suitability for the Black Warrior waterdog (Ashton and Peavy 1986, p. 64). Semi-permanent leaf beds (where they exist) are visited frequently (Ashton and Peavy 1986, p. 64). Larvae and adult waterdogs are reliably found only in these submerged leaf beds, and they may use them for both shelter and foraging habitat (Bailey 2000, p. 3). Guyer (1997, pp. 1–21) analyzed habitats to distinguish sites with waterdogs from those lacking the species. He found that Black Warrior waterdogs were associated with clay substrates lacking silt, wide and shallow stream morphology, increased snail and dusky salamander

(*Desmognathus* spp.) abundance, and decreased Asiatic clam (*Corbicula fluminea*) occurrence. Durflinger-Moreno *et al.* (2006, pp. 70–80) completed an additional assessment of 112 localities surveyed for waterdogs. At a regional scale, Black Warrior waterdogs were associated with stream depths of 1 to 4 meters (m) (3.3 to 13.1 feet (ft)), reduced sedimentation, and large leaf packs (leaves that fall into streams accumulate in packs usually behind branches, rocks, and other obstructions) supporting mayfly (*Ephemeroptera* spp.) and caddisfly (*Trichoptera* spp.) larvae.

Biology

Very little is known about the life history of the Black Warrior waterdog. Additionally, data are generally limited for other species of the southeastern *Necturus* waterdogs, as well.

Reproduction in the Black Warrior waterdog is aquatic. Egg disposition sites and clutch sizes are unknown. However, in the closely related Gulf Coast waterdog (*Necturus beyeri*), females attach their eggs singly to the undersides of underwater substrate (summarized in Guyer 2005, p. 868). Sexually active Black Warrior waterdog adults have been found in rock crevices (Bailey 2005, p. 867), and thus egg deposition may occur at these sites. Clutch sizes ranging from 4 to 40 eggs were reported in a summary of research conducted on the Gulf Coast waterdog (Guyer 2005, p. 868). Ashton and Peavy (1986, p. 64) collected post hatchling Black Warrior waterdog larvae in December; this suggests that nesting may occur in late spring or summer. Reproductive maturity is probably attained in the third winter or at 2.5 years of age (Bailey 2005, p. 867).

Aestivation (spending the summer in a state of inactivity) in Black Warrior waterdogs is suspected, as no specimens have been collected during the summer (Bailey 2005, p. 867). A similar seasonal pattern of activity primarily in winter and spring is also seen in other species of *Necturus* (Dundee 2005, p. 872; Guyer 2005, p. 868).

Larval and adult Black Warrior waterdogs are assumed to be opportunistic carnivores, but prey taken in the wild has not been described. Adults are attracted to traps baited with fish-flavored cat food (Bailey 2005, p. 867). Captive Black Warrior waterdogs have eaten small fish and earthworms (Bailey 2005, p. 867). Crayfish, isopods, amphipods, freshwater clams, and insects (including mayflies, caddisflies, dragonfly naiads, dytiscid beetles, and midges) have been reported as prey items in Gulf Coast waterdogs (Guyer 2005, p. 868).

Home ranges of Black Warrior waterdogs are likely small as in other species of the southeastern *Necturus*. As much more is known about the Gulf Coast waterdog, we are basing our analysis on its mark-recapture study where all recaptures were within 64 m (210 ft) of the original capture and release site (summarized in Guyer 2005, p. 868).

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, we may list a species based on: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its

continued existence. Listing actions may be warranted based on any of the above threat factors, singly or in combination. Each of these factors is discussed below.

Factor A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Water quality degradation is the primary threat to the continued existence of the Black Warrior waterdog. Bailey (2000, pp. 19–20) considered water quality degradation to be the primary reason for the extirpation of this species over much of its historical range in the upper Black Warrior River system. Changes in water chemistry and flow patterns, resulting in a decrease in water quality and quantity have detrimental effects on salamander ecology because they can render aquatic habitat unsuitable for salamanders. Substrate modification is also a major concern for aquatic salamander species (Geismar 2005, p. 2; O'Donnell *et al.* 2006, p. 34). Unobstructed interstitial space (pertaining to being between things, especially between things that are normally close) is a critical component of the habitat for the Black Warrior waterdog, because it provides cover from predators and habitat for their macroinvertebrate prey items within the sites. When the interstitial spaces become compacted or filled with fine sediment, the amount of available foraging habitat and protective cover for salamanders with these behaviors is reduced, resulting in population declines (Welsh and Ollivier 1998, pp. 1, 128; Geismar 2005, p. 2; O'Donnell *et al.* 2006, p. 34). Most streams surveyed for the Black Warrior waterdog showed evidence of water quality degradation, and many appeared biologically depauperate (limited aquatic species diversity) (Bailey 1992, p. 2 and 1995, p. 11; Durflinger-Moreno *et al.* 2006, p. 78).

Discharges

Sources of point (point source discharge) and nonpoint (land surface runoff) pollution in the Basin have been numerous and widespread. Point pollution is generated from inadequately treated effluent from industrial plants, sanitary landfills, sewage treatment plants, and drain fields from individual private homes (Service 2000, pp. 12–13). Nonpoint pollution originates from agricultural activities, poultry and cattle feedlots, abandoned mine runoff, construction, silviculture, failing septic tanks, and contaminated runoff from urban areas (Deutsch *et al.* 1990, pp. 1–62, Upper Black Warrior Technical Task Force 1991, p. 1; O’Neil and Sheppard 2001, p. 2). These sources contribute pollution to the Basin via sediments, fertilizers, herbicides, pesticides, animal wastes, septic tank and gray water leakage, and oils and greases. Water quality and native aquatic fauna have declined as a result of this pollution, which causes nitrification, decreases in dissolved oxygen concentration, and increases in acidity and conductivity. These alterations have a direct effect on the survival of Black Warrior waterdogs, which, due to their highly permeable skin (Duellman and Trueb 1986, p. 197) and external gills, are very sensitive to declines in water quality and oxygen concentration.

Urbanization is a significant source of water quality degradation that can reduce the survival of aquatic organisms, such as the Black warrior waterdog (Bowles *et al.* 2006, p. 119; Chippindale and Price 2005, pp. 196–197). Urban development leads to various stressors on aquatic systems, including increased frequency and magnitude of high flows in streams, increased sedimentation, increased contamination and toxicity, and changes in stream morphology and water chemistry (Coles *et al.* 2012, pp. 1–3, 24, 38, 50–51). Urbanization can also impact aquatic species by negatively affecting their invertebrate prey base (Coles *et al.* 2012, p. 4). Urbanization also increases the sources

and risks of an acute or catastrophic contamination event, such as a leak from an underground storage tank or a hazardous materials spill on a highway. Several researchers have examined the negative impact of urbanization on stream salamander habitat by making connections between salamander abundances and levels of development within the watershed. In a 1972 study on the dusky salamander (*Desmognathus fuscus*) in Georgia, Orser and Shure (p. 1,150) found a decrease in stream salamander density with increasing urban development. A similar relationship between salamander populations and urbanization was found in another study on the dusky salamander, two-lined salamander (*Eurycea bislineata*), southern two-lined salamander (*Eurycea cirrigera*), and other species in North Carolina (Price *et al.* 2006, pp. 437–439; Price *et al.* 2012a, p. 198), Maryland, and Virginia (Grant *et al.* 2009, pp. 1,372–1,375). Willson and Dorcas (2003, pp. 768–770) demonstrated the importance of examining disturbance within the entire watershed as opposed to areas just adjacent to the stream by showing that salamander abundance in the dusky and two-lined salamanders is most closely related to the amount and type of habitat within the entire watershed.

The large population centers such as Birmingham, Tuscaloosa, and Jasper contribute substantial runoff to the Basin. The watershed occupied by these three cities contains more industrial and residential land area than other river basins in Alabama. Streams draining these areas have a history of serious water quality problems, as described above. Species of fish, mussels, and snails (Mettee *et al.* 1989, pp. 14–16; Hartfield 1990, pp. 1–8), and populations of the flattened musk turtle (Service 1990, p. 3), have been extirpated from large areas of the watershed primarily due to water quality degradation. For example, Mettee *et al.* (1989, pp. 14–16) noted the absence of at least

nine fish species from streams draining the Birmingham metropolitan area where they had previously been common, and Hartfield (1990, pp. 1–8) documented the extirpation of 39 to 40 species of mussels from individual tributaries of the Black Warrior River. In addition, highway construction may reroute streams or change their shape.

Forest Management

Forestry operations and road construction are also sources of nonpoint pollution when best management practices (BMPs) are not followed to protect streamside management zones (Hartfield 1990, pp. 4–6; Service 2000, p. 13). Logging can cause erosion, siltation, and streambed structural changes from the introduction of tree slash. Forestry road construction, stream crossings, and bridge replacements can also result in increased sedimentation, and runoff may introduce toxic chemicals into streams.

According to Alabama's BMPs for forestry, stream management zones (SMZs) should be 35 ft (50 ft for sensitive areas). Recently, the forest industry has begun to self-regulate SMZs through a certification program in which mills will not accept timber from foresters who do not comply with SMZs.

Surface Mining

Surface mining represents another threat to the biological integrity of streams in the Basin and has undoubtedly, in the past, affected the distribution of the Black Warrior waterdog (Bailey 1995, p. 10). Strip mining for coal results in hydrologic problems (i.e., erosion, sedimentation, decline in groundwater levels, and general degradation of water quality) that affect many aquatic organisms (Service 2000, p. 12). Runoff from coal surface mining generates pollution through acidification, increased mineralization, and sediment loading. Impacts are generally associated with past activities and abandoned

mines, since presently operating mines are required to employ environmental safeguards established by the Federal Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.) and the Clean Water Act of 1972 (33 U.S.C. 1251 et seq.) (Service 2000, p. 12). Old, abandoned mines will continue to contribute pollutants to streams into the future.

Recently, new coal mines, which have the potential of discharging additional pollutants into the waters within the range of the Black Warrior waterdog, have been proposed in the Sipsey Fork and the Mulberry Fork (Dillard 2011, pers. comm.; Alabama Surface Mining Commission 2012, pp. 1–4).

Sedimentation

Sedimentation has probably caused similar declines for Black Warrior waterdogs as it has for the flattened musk turtle, which also occurs in the upper Basin.

Sedimentation in this system has negatively affected the flattened musk turtle by: (1) Reduction of mollusks and other invertebrates used as food; (2) physical alteration of rocky habitats where animals forage and take cover, and (3) accumulation of substrate in which chemicals toxic to animals and their prey persist (Dodd *et al.* 1988, pp. 1–61). The Sipsey Fork of the Black Warrior River is the best remaining locality for the Black Warrior waterdog (Guyer 1998, p. 2). Bailey and Guyer (1998, pp. 77–83) completed a study of the flattened musk turtle at this site. They found that the turtle population was declining and suggested that habitat quality is also deteriorating. Because of similar habitat use, deteriorating habitat quality may likewise affect the Black Warrior waterdog.

Black Warrior waterdogs are vulnerable to sedimentation, and the associated pollution concentrated in sediments, as they spend virtually all of their lives at the stream

bottom and would be in almost constant contact with any toxic substances that may be present (Bailey 1995, p. 10). The skin of amphibians is highly permeable, and water is exchanged readily with the environment. As a result, the respiration (breathing) and osmoregulation (balance of body fluids) of Black Warrior waterdogs would be negatively affected by toxic sediments. Excessive sediments also impact the hard stream and river bottoms by making the habitat unsuitable for feeding or reproduction of Black Warrior waterdogs. For example, sediments have been shown to affect respiration, growth, reproductive success, and survival of aquatic insects and fish (Waters 1995, pp. 173–175) that serve as food sources for the waterdog (Bailey 2005, p. 867). Potential sources of pollution and associated sedimentation within a watershed include virtually all activities that disturb the land surface, and all localities currently occupied by the Black Warrior waterdog are affected by varying degrees by sedimentation (O’Neil and Sheppard 2001, Appendix B, p. 5). Sedimentation or siltation is one of the most severe threats to the Black Warrior River (Black Warrior Riverkeeper 2012, p. 1). The Black Warrior River watershed receives significant pollutant loading from activities related to the human population and land-use activities, including sedimentation from construction, forestry, mining, agriculture, and channelization of stream segments (Black Warrior River Watershed Management Plan n.d., p. 4.3).

Impoundments

Creation of large impoundments, behind Bankhead, Lewis, and Holt dams, within the Basin has flooded thousands of square hectares (acres) of habitat previously considered appropriate for the Black Warrior waterdog. Hartfield (1990, p. 7) summarized the number of miles of streams affected by impoundments in the Basin. He

found that the entire main channel of the Black Warrior River, over 272 kilometers (km) (170 miles (mi)), has been affected. Impoundments do not have the shallow, flowing water preferred by the species. As a result, they are likely marginal or unsuitable habitat for the salamander. The abundance of predatory fish in impoundments further renders these lakes unsuitable for the Black Warrior waterdog. Impoundments have been entrapments for waterdogs.

Two historical populations of the Black Warrior waterdog have been lost due to impoundments. Of the remaining historical populations, only one appears to be holding on in numbers sufficient enough to be captured regularly (Sipsey Fork on BNF). A second population is present on Locust Fork, but the numbers of waterdogs present appears low, based on the erratic capture success at the site. Through the use of eDNA, Godwin (2014, pers. comm.) identified a historical site on Yellow Creek as having Black Warrior waterdogs present. A couple years later, in 2016, a Black Warrior waterdog was indeed captured in Yellow Creek. Further, Godwin also identified two new sites in the Basin through the eDNA method, but as of yet, no waterdogs have been captured (recently) at any of the eDNA sites. Based on evolution biology, the current known and suspected populations are isolated and fragmented by human-made barriers, further compounding the effects of inbreeding and contributing to the species' decline.

Summary of Factor A

The historical loss of habitat is currently, and projected to continue to be, a threat to the Black Warrior waterdog. Habitat loss also amplifies the threat from point and nonpoint source water and habitat quality degradation, accidental spills, and violation of permitted discharges. Due to the limited extent of the habitat currently occupied by the

species and the severity and magnitude of this threat, we consider that the present or threatened destruction, modification, or curtailment of habitat and range represents a threat to the Black Warrior waterdog. While changes to management and operating procedures have reduced impacts to the river system, ongoing activities continue to impact water quality.

Factor B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Based on best available data, there is no evidence that overutilization for commercial, recreational, scientific, or educational purposes is a threat to the Black Warrior waterdog.

Factor C. Disease or Predation

No diseases or incidences of predation have been reported for the Black Warrior waterdog. Also, Bart and Holzenthal (1985, p. 406) found that there is no natural evidence of predation on *Necturus* spp. by fish in creeks and streams. Therefore, the best available data do not indicate that disease or predation is a threat to the Black Warrior waterdog.

Factor D. The Inadequacy of Existing Regulatory Mechanisms

Under this factor, we examine whether existing regulatory mechanisms are inadequate to address the threats to the Black Warrior waterdog discussed under other factors. Section 4(b)(1)(A) of the Act requires the Service to take into account, “those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species.” In relation to Factor D under the Act, we interpret this language to require the Service to consider relevant Federal, State, and

Tribal laws and regulations, and other such mechanisms that may minimize any of the threats we describe in threat analyses under the other four factors, or otherwise enhance conservation of the species. We give strongest weight to statutes and their implementing regulations and to management direction that stems from those laws and regulations. An example would be State governmental actions enforced under a State statute or constitution, or Federal action under statute.

The Federal Surface Mining Control and Reclamation Act of 1977, as amended December 22, 1987, requires all permitted mining operations to minimize disturbances and adverse impacts to fish, wildlife, and related environmental values, as well as implement enhancement measures where practicable. It further recognizes the importance of land and water resources restoration as a high priority in reclamation planning. The continued decline of many species, including the flattened musk turtle, fish, and a number of mussels in the Black Warrior Basin (Dodd *et al.* 1988, pp. 55–61; Mettee *et al.* 1989, pp. 12–13; Hartfield 1990, pp. 1–8; Bailey and Guyer 1998, pp. 77–83; Service 2000, pp. 12–13), is often attributed to mining activities, even though this law is in effect.

The Alabama Department of Conservation and Natural Resources (ADCNR) recently added the Black Warrior waterdog to its list of non-game State protected species (ADCNR 2012, pp. 1–4). Although this change will make it more difficult to obtain a collecting permit for the species, it does not offer any additional protection for habitat loss and degradation. The ADCNR also recognizes the Black Warrior waterdog as a Priority 2 species of high conservation concern in its State Wildlife Action Plan due to its

rarity and restricted distribution (ADCNR 2005, p. 298). However, this designation also does not offer any regulatory protections.

Stream segments within the Black Warrior River drainage currently occupied by the Black Warrior waterdog have been assigned water-use classifications of fish and wildlife (F&W) by the Alabama Department of Environmental Management (ADEM) under the authority of the Clean Water Act of 1972. The F&W designation establishes minimum water quality standards that are believed to be protective of aquatic species. In the Locust Fork, Mulberry Fork, and other tributaries of the Black Warrior River occupied by the Black Warrior waterdog, a combined total of 275 km (171 mi) have been identified on the Alabama 303(d) List (a list of water bodies failing to meet their designated water-use classifications) as impaired by siltation and nutrients (ADEM 2010, pp. 1–3). The sources of these impairments have been identified as runoff from agricultural fields, abandoned surface mines, and industrial or municipal sites. Multiple stream reaches within the occupied habitat of the Black Warrior waterdog (Locust Fork, Mulberry Fork, Yellow Creek, and North River) fail to meet current regulatory standards.

Similarly, even with current regulations, surviving populations are negatively affected by discharges, highway construction, mining (current and unreclaimed sites), and other activities with a Federal nexus (see discussion under *Factor A*, above).

Summary of Factor D

Black Warrior waterdogs and their habitats are partially protected by Federal and State laws and regulations. However, after evaluating the information available on the implementation of these authorities, we determined that these regulatory mechanisms do not address the threats to the species.

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

The remaining Black Warrior waterdog populations are isolated from each other by unsuitable habitat created by impoundments, pollution, and other factors as described under the *Factor A* discussion, above. Waterdog population densities are low even in the best localities, and factors related to low population compound these threats.

Inbreeding

Species that are restricted in range and population size are more likely to suffer loss of genetic diversity due to genetic drift, potentially increasing their susceptibility to inbreeding depression, decreasing their ability to adapt to environmental changes, and reducing the fitness of individuals (Soule 1980, pp. 157–158; Hunter 2002, pp. 97–101; Allendorf and Luikart 2007, pp. 117–146). It is likely that some of the Black Warrior waterdog populations are below the effective population size required to maintain long-term genetic and population viability (Soule 1980, pp. 162–164; Hunter 2002, pp. 105–107). The long-term viability of a species is based on the conservation of numerous local populations throughout its geographic range (Harris 1984, pp. 93–104). These separate populations are essential for the species to recover and adapt to environmental change (Noss and Cooperrider 1994, pp. 264–297; Harris 1984, pp. 93–104). The level of isolation and fragmentation seen in this species makes natural repopulation following localized extirpations virtually impossible without human intervention.

Drought

Droughts cause decreases in water flow and dissolved oxygen levels and increases in temperature in the river system. Studies of other aquatic salamander species have reported decreased occupancy, loss of eggs, decreased egg-laying, and extirpation from

sites during periods of drought (Camp *et al.* 2000, p. 166; Miller *et al.* 2007, pp. 82–83; Price *et al.* 2012b, pp. 317–319).

Spills

Associated with urbanization is the development of transportation system, including roads, rails, airports, locks, and docks. Accidents, crashes, and derailments, resulting in spills, occur along these transportation corridors. Since 1990, there have been over 1,200 spills reported, to the U.S. Coast Guard National Response Center, in the Basin area. One of several spills that have occurred in the Blackwater Basin was an event in the Black Warrior River in 2013. Approximately 164 gallons of crude oil were accidently pumped into the river. Emergency response teams cleaned the river, but a sheen of crude oil remained visible (Taylor 2013, pers. comm.)

(<http://www.tuscaloosanews.com/article/20130617/NEWS/130619792>). Today, the threat from spills remains unchanged.

Climate Change

Our analyses under the Act include consideration of ongoing and projected changes in climate.

According to the IPCC (2013, p. 4), “Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.” Average Northern Hemisphere temperatures during the second half of the 20th century were very likely higher than during any other 50-year period in the last 500 years and likely the highest in at least the past 1,300 years (IPCC 2007b, p. 1). It is very

likely that from 1950 to 2012, cold days and nights have become less frequent and hot days and hot nights have become more frequent on a global scale (IPCC 2013, p. 4). It is likely that the frequency and intensity of heavy precipitation events has increased over North America (IPCC 2013, p. 4).

The IPCC (2013, pp. 15–16) predicts that changes in the global climate system during the 21st century are very likely to be larger than those observed during the 20th century. For the next two decades (2016 to 2035), a warming of 0.3 degrees Celsius (°C) (0.5 degrees Fahrenheit (°F)) to 0.7 °C (1.3 °F) per decade is projected (IPCC 2013, p. 15). Afterwards, temperature projections increasingly depend on specific emission scenarios (IPCC 2007b, p. 6). Various emissions scenarios suggest that by the end of the 21st century, average global temperatures are expected to increase 0.3 °C to 4.8 °C (0.5 °F to 8.6 °F), relative to 1986 to 2005 (IPCC 2013, p. 15). By the end of 2100, it is virtually certain that there will be more frequent hot and fewer cold temperature extremes over most land areas on daily and seasonal timescales, and it is very likely that heat waves and extreme precipitation events will occur with a higher frequency and intensity (IPCC 2013, pp. 15–16).

Climate change has the potential to increase the vulnerability of the Black Warrior waterdog to random catastrophic events (e.g., McLaughlin *et al.* 2002; Thomas *et al.* 2004). Climate change is expected to result in increased frequency and duration of droughts and the strength of storms (e.g., Cook *et al.* 2004). Thomas *et al.* (2009, p. 112) report that the frequency, duration, and intensity of droughts are likely to increase in the Southeast as a result of global climate change.

Summary of Factor E

We consider the Black Warrior waterdog vulnerable to other natural or manmade factors, because low population densities combined with fragmentation of habitat renders the Black Warrior waterdog populations extremely vulnerable to inbreeding depression (negative genetic effects of small populations) (Wright *et al.* 2008, p. 833) and catastrophic events such as flood, drought, or chemical spills (Black Warrior River Watershed Management Plan n.d., p. 4.4).

Cumulative Effects of Threats

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Black Warrior waterdog. Threats to the remaining Black Warrior waterdog populations exist primarily from two of the five threat factors (Factors A and E), and existing laws and regulations provide only minimal protection against habitat loss (Factor D). Threats also occur in combination, resulting in synergistically greater effects. For instance, in combination with the other threats identified in this proposed rule, a catastrophic hazardous materials spill could increase the species' risk of extinction by reducing its overall probability of persistence. Therefore, we consider hazardous material spills to be an ongoing significant threat to the Black Warrior waterdog due to the species' limited distribution, the abundance of potential sources of spills, and the number of salamanders that could be killed during a single spill event (Factor E).

Proposed Determination

The Act defines an endangered species as any species that is "in danger of extinction throughout all or a significant portion of its range" and a threatened species as any species "that is likely to become endangered throughout all or a significant portion of

its range within the foreseeable future.” We find that the Black Warrior waterdog is presently in danger of extinction throughout its entire range based on the severity and immediacy of threats currently impacting the species. The overall range has been significantly reduced, and the remaining habitat and populations face threats from a variety of factors (Factors A and E) acting in combination to reduce the overall viability of the species. The risks of extinction are high because the remaining populations are small, isolated, and have limited potential for recolonization (Factor E). Therefore, on the basis of the best available scientific and commercial information, we propose to list the Black Warrior waterdog as an endangered species in accordance with sections 3(6) and 4(a)(1) of the Act.

We find that a threatened species status is not appropriate for the Black Warrior waterdog because of the species’ contracted range, loss of habitat due to water quality degradation (sedimentation, toxins, and nutrients), fragmentation of the populations caused by impoundments, rangewide (not localized) threats, and ongoing threats expected to continue into the future.

Significant Portion of the Range

Under the Act and our implementing regulations, a species may warrant listing if it is endangered or threatened throughout all or a significant portion of its range. Because we have determined that Black Warrior waterdog is endangered throughout all of its range, no portion of its range can be “significant” for purposes of the definitions of “endangered species” and “threatened species.” See the Final Policy on Interpretation of the Phrase “Significant Portion of Its Range” in the Endangered Species Act’s Definitions of “Endangered Species” and “Threatened Species” (79 FR 37578, July 1, 2014).

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing actions results in public awareness and conservation by Federal, State, Tribal, and local agencies; private organizations; and individuals. The Act encourages cooperation with the States and other countries and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Section 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline, shortly after a species is listed, and preparation of a draft and final recovery plan. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes

available. The recovery plan also identifies recovery criteria for review of when a species may be ready for downlisting or delisting, and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. If this species is listed, the recovery outline, draft recovery plan, and the final recovery plan will be available on our website (<http://www.fws.gov/endangered>), or from our Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (e.g., restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

If this species is listed, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the State of Alabama would be eligible for Federal funds to implement management actions that promote the protection or recovery

of the Black Warrior waterdog. Information on our grant programs that are available to aid species recovery can be found at: <http://www.fws.gov/grants>.

Although the Black Warrior waterdog is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402.

Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as described in the preceding paragraph include management and any other landscape-altering activities on Federal lands administered by the Service, U.S. Forest Service, and Bureau of Land Management; issuance of section 404 Clean Water

Act permits by the U.S. Army Corps of Engineers; construction and maintenance of gas pipeline and power line rights-of-way by the Federal Energy Regulatory Commission; construction and maintenance of roads or highways by the Federal Highway Administration; land management practices supported by programs administered by the U.S. Department of Agriculture; Environmental Protection Agency pesticide registration; and projects funded through Federal loan programs which include, but are not limited to, roads and bridges, utilities, recreation sites, and other forms of development.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to endangered wildlife. The prohibitions of section 9(a)(1) of the Act, codified at 50 CFR 17.21, make it illegal for any person subject to the jurisdiction of the United States to take (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these) endangered wildlife within the United States or on the high seas. In addition, it is unlawful to import; export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of commercial activity; or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to employees of the Service, the National Marine Fisheries Service, other Federal land management agencies, and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22. With regard to endangered wildlife, a permit may be issued for scientific purposes, to enhance the propagation or survival of the species, and for

incidental take in connection with otherwise lawful activities. There are also certain statutory exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of species proposed for listing. Based on the best available information, the following actions are unlikely to result in a violation of section 9, if these activities are carried out in accordance with existing regulations and permit requirements; this list is not comprehensive:

(1) Normal agricultural and silvicultural practices, including herbicide and pesticide use, which are carried out in accordance with any existing regulations, permit, and label requirements, and best management practices; and

(2) Normal residential development and landscape activities, which are carried out in accordance with any existing regulations, permit requirements, and best management practices.

Based on the best available information, the following activities may potentially result in a violation of section 9 the Act; this list is not comprehensive:

(1) Unauthorized introduction of nonnative species that compete with or prey upon the Black Warrior waterdog;

(2) Unauthorized collecting, handling, possessing, selling, delivering, carrying, or transporting of the species, including import or export across State lines and international

boundaries, except for properly documented antique specimens of this taxa, as defined by section 10(h)(1) of the Act;

(3) Unauthorized destruction or alteration of Black Warrior waterdog habitat that results in destruction or loss of leaf packs and rocky substrate (rock crevices in the creek or stream);

(4) Unauthorized discharge of chemicals or fill material into any waters in which the Black Warrior waterdog is known to occur; and

(5) Actions, intentional or otherwise, that would result in the destruction of eggs or cause mortality or injury to hatchling, juvenile, or adult Black Warrior waterdogs.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Section 4(a)(3) of the Act requires the Secretary, at the time a species is listed as endangered or threatened, to designate critical habitat to the maximum extent prudent and determinable. Elsewhere in this issue of the **Federal Register**, we propose to designate critical habitat for the Black Warrior waterdog.

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;

- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

National Environmental Policy Act

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), need not be prepared in connection with listing a species as an endangered or threatened species under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of references cited in this proposed rule is available on the Internet at <http://www.regulations.gov> and upon request from the Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Alabama Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. Amend §17.11(h) by adding an entry for “Waterdog, Black Warrior” to the List of Endangered and Threatened Wildlife in alphabetical order under AMPHIBIANS to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* * * * *				
AMPHIBIANS				
* * * * *				
Waterdog, Black Warrior	<i>Necturus alabamensis</i>	Wherever found	E	<u>[Federal Register citation of the final rule]</u>
* * * * *				

Dated: September 26, 2016.

Signed: Stephen Guertin

Acting Director, U.S. Fish and Wildlife Service.

Billing Code 4333-15-P

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